

19. (Once Amended) The power operated piston tool according to claim 13, wherein an inner end surface of end segments of the hollow element is outwardly curved.

20. (Once Amended) The power operated piston tool according to claim 13, wherein walls of both end segments of the hollow element are thicker than walls of inner segments of the hollow element.

REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1-20 are pending in the application. Claims 1, 8, and 13 are independent.

The undersigned and inventors Lagodzinski and Rogowski, would like to thank Examiners Weeks and Smith for the cordial and productive interview of November 13, 2002. The Examiners' helpful comments and suggestions were instrumental in preparing this response.

Claims 1-20 were rejected as being unpatentable over Melocco and Dohl, for the reasons detailed at pages 2-9 of the Office Action. As discussed at the interview, Applicants respectfully traverse all art rejections.

As discussed at the interview, independent Claim 1 recites a novel combination of structure and/or function whereby the piston return means (e.g., the elastomeric bush 7 in the Figs.) comprises a one piece elastic returning bush having a shape of a bellows, the returning bush having (i) an external bellows diameter which varies regularly in a longitudinal direction, and (ii) an internal bellows diameter which varies regularly in the longitudinal direction. See, for example, the embodiment of Fig. 5. In contrast, none of the cited art, including Melocco, Dohl, or Brunelle (taken individually or in combination) discloses or suggests a combination of structure and function including these features. Accordingly, the salient claimed features of the present invention are fully patentable over the cited art.

As also discussed at the interview, independent Claim 8 recites a novel combination of structure and/or function whereby the elastomeric hollow element has an external diameter and an internal diameter both of which vary regularly to form

uniformly spaced swellings and narrowings running longitudinally on an outer surface and an inner surface of the hollow element. Again, none of the cited art discloses or suggests a combination including these features.

As further discussed at the interview, independent Claim 13 recites a novel combination of structure and/or function whereby the hollow element has at least one end segment which has a thicker wall than a non-end segment. Please again refer to the embodiment of Fig 5. Since none of the cited art discloses or suggests such a feature, the claimed invention is fully patentable over the cited art.


At the interview, Applicants also urged the separate patentability of at least dependent Claims 4 and 5, which are also shown in the Fig. 5 embodiment, and which also are neither disclosed or suggested by the cited art.

In view of the above amendments and remarks, it is believed that this application is now in condition for allowance, and a Notice thereof is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 625-3500. All

correspondence should continue to be directed to our address
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Respectfully submitted,



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Marked-up Claims

1. (Three Times Amended) A power actuated piston tool with a piston automatic return, comprising:

an external barrel having a rear end;

a guiding barrel disposed in the external barrel;

[and]

a fastener guide [situated] disposed in the external barrel;

a piston means having a piston shank and a piston head disposed in said guiding barrel, said piston means being configured to be moveable [and placed moveably in the guiding barrel] between a firing position, an initial position, [of the piston means] and a fastening position [of the piston means via an initial position of the piston means];

a firing-pin assembly [situated] disposed at the rear end of the external barrel and operatively connected to the external barrel; and

piston return means configured to automatically return [for an automatic piston return of] the piston means from the fastening position to the firing position, said piston return means being disposed on said [and situated on a] piston shank between the piston head and the fastener guide, said piston

return means comprising [wherein the means for the automatic piston return is] a one piece elastic returning bush having a shape of bellows, said returning bush having [wherein] (i) an external bellows diameter which varies regularly in a longitudinal direction, and (ii) an internal bellows diameter which varies regularly in the longitudinal direction, [diameters are regularly varied creating uniformly spaced swellings and narrowings and wherein] said piston return means being configured such that, in the initial [blocking] position, [of the piston means] a sum of [wall thickness of all segments created between neighboring narrowings and] a longitudinal length of said piston return means plus a longitudinal length of the fastener guide is [slightly larger] greater than [a sum of] a longitudinal length of the piston shank [and a thickness of a fastener head].

2. (Four Times Amended) The power actuated piston tool, according to claim 1, wherein said [the one-piece elastic] returning bush is configured to approximate at least one of [approximates to] (i) a stack of truncated-spherical segments, [or to] (ii) a stack of frusto-conical segments, [or to] and (iii) a stack of barrel-shaped segments.

3. (Four Times Amended) The power actuated piston tool, according to claim 2, wherein said returning bush has two end segments, at least one of which has a maximum internal diameter [of at least one segment of the one-piece elastic returning bush at its both ends is smaller] which is less than a maximum internal diameter of remaining segments of said [the one-piece elastic] returning bush.

4. (Four Times Amended) The power actuated piston tool, according to claim [2] 3, wherein end segment walls of said [the one-piece elastic] returning bush are thicker than other [segment walls] segments of said [the one-piece elastic] returning bush.

5. (Four Times Amended) The power actuated piston tool, according to claim 2, wherein said piston return means has an internal end surface [of external segments of the one-piece elastic returning bush is markedly] that is curved [outside thereby] such that a position of a center of curvature of the curved end surface is [clearly distanced] disposed at a distance from [a returning bush] an end-face of said piston return means.

6. (Four Times Amended) The power actuated piston tool, according to claim 2, wherein a length of said [the one-piece elastic] returning bush is [selected in such a way,] configured such that, in the initial [blocking] position [of the piston means], a piston shank end-face does not reach its extreme forward position and remains at a distance [being greater than the thickness of the fastener head] from a base.

7. (Four Times Amended) The power actuated piston tool, according to claim 2, wherein a maximum external diameter of said [the one-piece elastic] returning bush is configured to be smaller than an internal diameter of the guiding barrel [,] such that, in the initial position [blocking of the piston means], an external diameter of said [the one-piece elastic] returning bush [still remains] is smaller than the internal diameter of the guiding barrel [, thus preserving a slight clearance].

8. (Three Times Amended) A power operated piston tool with a piston automatic return, comprising:

an outer barrel having a firing chamber at a first end
thereof;

a guiding barrel mounted in the outer barrel;

a fastener guide having [an outer surface at] a thin end with an outer surface and [mounted at] a thick part disposed in the guiding barrel, said fastener guide being configured such that said [and with the] thin end [standing out] protrudes from the outer barrel;

a piston [provided with] having (i) a piston head [placed] disposed in the guiding barrel and (ii) a piston shank [inserted] disposed in the fastener guide [wherein the], said piston being configured to be moveable [is movably positioned] from a firing position [via an] to an initial blocking position and to a fastening position;

a firing-pin assembly mounted at the first end of the outer barrel; and

a hollow element having a bellows shape configured to cause [of bellows and causing] an automatic return of the piston from the fastening position to the firing position, said hollow element being disposed [and situated] on the piston shank between the piston head and the fastener guide, said hollow element comprising an [and made of] elastomeric material,

[wherein] an [outer] external diameter of the hollow element and an internal diameter of the hollow element both varying [are] regularly [varied creating] to form uniformly spaced swellings and narrowings running [circularly] longitudinally on an outer surface and an inner surface of the hollow element, [and] wherein between each two neighboring narrowings is formed a segment with at least one of (i) a sinusoidal, (ii) [or] a frusta-spherical, (iii) [or] a frusta-conical, and (iv) [or] a barrel wall contour, and wherein, in the initial blocking position, [of the piston] a sum of a longitudinal length of said hollow element plus [wall thickness of all segments of the hollow element and] a longitudinal length of the fastener guide is [slightly larger] greater than a [sum of a] length of the piston shank [and a thickness of a fastener head].

9. (Once Amended) The power operated piston tool according to claim 8, wherein a maximal inner diameter of at least one [said segment of the bellowslike] end of said hollow element [at its both ends is smaller] is less than [an] a maximal inner diameter of [remaining segments] a segment of said hollow element which is not an end.

10. (Once Amended) The power operated piston tool according to claim 8, wherein walls of [outer] end segments of [the bellowslike] said hollow element are thicker than walls of inner segments of said hollow element.

11. (Once Amended) The power operated piston tool according to claim 8, wherein an inner end surface of [outer] end segments of [the bellowslike] said hollow element is outwardly curved.

12. (Once Amended) The power operated piston tool according to claim 8, wherein a sum of a longitudinal length of said [wall thickness of all segments of the bellowslike] hollow element [and] plus a length of the fastener guide is [slightly larger] greater than a [sum of a] length of the piston shank [and a thickness of a fastener head], said piston being configured such that [thereby] a piston shank end face is distanced from the outer surface of the fastener guide [slightly more than the thickness of the fastener head] in an initial blocking position of the piston.

13. (Once Amended) A power operated piston tool with a piston automatic return, comprising:

an outer barrel having a firing chamber at a first end thereof;

a guiding barrel mounted in the outer barrel;

a fastener guide having [an outer surface at] a thin end with an outer surface and [mounted at] a thick part disposed in the guiding barrel, said fastener guide being configured such that said [and with the] thin end [standing out] protrudes from the outer barrel;

a piston [provided with] having (i) a piston head [placed] disposed in the guiding barrel and (ii) a piston shank [inserted] disposed in the fastener guide [wherein the], said piston being configured to be moveable [is movably positioned] between a firing position and a fastening position;

a firing-pin assembly mounted at the first end of the outer barrel; and

a one-piece hollow element formed of segments and [situated] disposed on the piston shank between the piston head and the fastener guide, said hollow element comprising [and made of] elastomeric material, wherein a sum of a length of the fastener guide [and] plus a length of [the one-piece] said

hollow element [in a state] when the piston is in an initial blocking position [wall surfaces of neighboring segments of the one-piece element are in an introductory contact] is [slightly larger] greater than a [sum of a] length of the piston shank [and a thickness of a fastener head], said piston being configured such that [thereby] a piston shank end face is distanced from the outer surface of the fastener guide [slightly more than the thickness of the fastener head] in [an] the initial blocking position of the piston, said hollow element having at least one end segment which has a thicker wall than a non-end segment.

14. (Once Amended) The power operated piston tool according to claim 13, wherein a wall of each segment of the segments of the [one-piece] hollow element has a sinusoidal [profile] cross-section.

15. (Once Amended) The power operated piston tool according to claim 13, wherein a wall of each segment of the segments of the [one-piece] hollow element has a frustum of sphere [profile] cross-section.

16. (Once Amended) The power operated piston tool according to claim 13, wherein a wall of each segment of the segments of the [one-piece] hollow element has a frustum of a cone [profile] cross-section.

17. (Once Amended) The power operated piston tool according to claim 13, wherein a wall of each segment of the segments of the [one-piece] hollow element has a barrel [profile] cross-section.

18. (Once Amended) The power operated piston tool according to claim 13, wherein a wall of each segment of the segments of the [one-piece] hollow element has a frustum of barrel [profile] cross-section.

19. (Once Amended) The power operated piston tool according to claim 13, wherein an inner end surface of [outer] end segments of the [one-piece] hollow element is outwardly curved.

20. (Once Amended) The power operated piston tool according to claim 13, wherein walls of [outer] both end

segments of the [one-piece] hollow element are thicker than
walls of inner segments of the hollow element.